PATENT NO.

: 6,883,574 B2

Page 1 of 9

APPLICA

APPLICATION NO.: 10/633926

DATED

: April 26, 2005

INVENTOR(S)

: Gregory M. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The Title Page showing an illustrative figure, should be deleted and substitute therefor the attached title page.

On the title page:

Item (54) "Title",

change "APPARATUS FOR APPLICATION OF

ADHESIVE TAPE TO SEMICONDUCTOR DEVICES" to --METHOD AND APPARATUS FOR APPLICATION

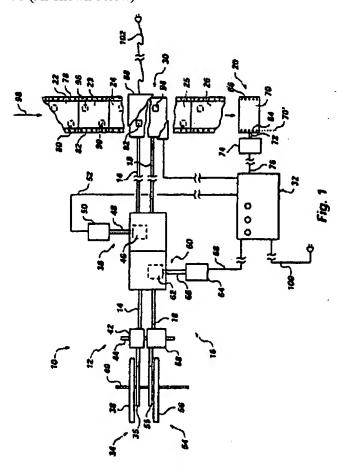
OF ADHESIVE TAPE TO SEMICONDUCTOR

DEVICES--

In the drawings:

In FIG. 1,

change existing lead line for reference numeral --86-- to accurately extend from teeth on right side of indexing roller 70 (As shown below)



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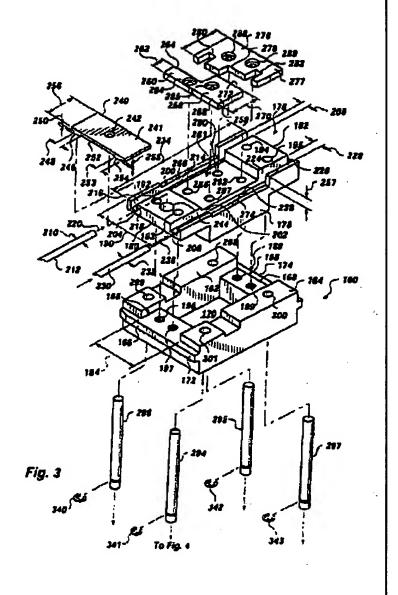
DATED: April 26, 2005

INVENTOR(S): Gregory M. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In FIG. 3,

change lowermost second occurrence of reference numeral "260" located below reference numeral 290 to --261--; add reference numeral --184-- and an appropriate lead line to indicate a distance change first occurrence of reference numeral "341" located below guide post 296, to --340-- (As shown below)



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APPLICATION NO.: 10/633926 **DATED**

: April 26, 2005

INVENTOR(S)

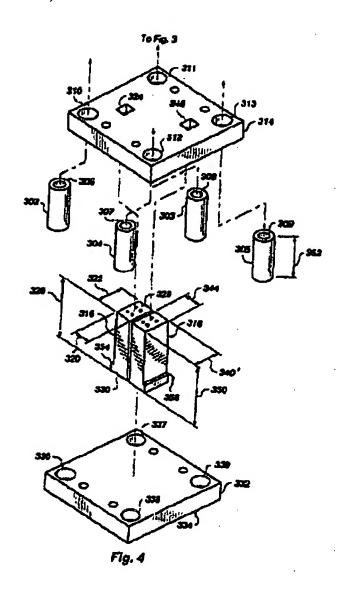
: Gregory M. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In FIG. 4,

change reference numeral "340" to --340'-- (As shown

below)



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DATED: April 26, 2005

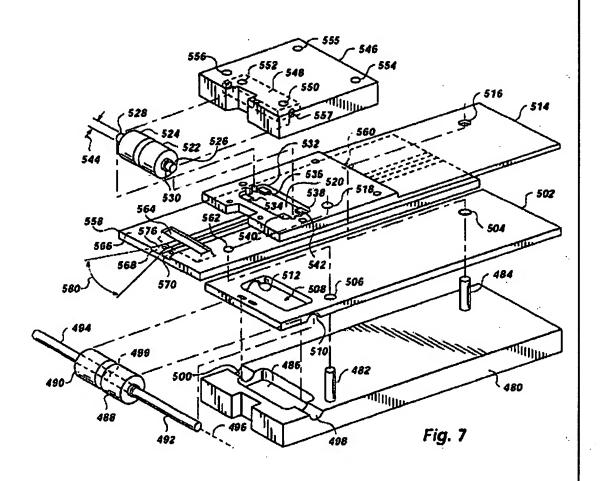
INVENTOR(S): Gregory M. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In FIG. 7, add reference numeral --562-- and associated lead line to

aperture located left of reference numeral 540 (As shown

below)



PATENT NO. : 6,883,574 B2 APPLICATION NO.: 10/633926

DATED

: April 26, 2005

INVENTOR(S) : Gregory M. Chapman

> It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In FIG. 12,

add reference numeral --568-- and an appropriate lead

Page 5 of 9

line (As shown below)



Fig. 12

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APPLICATION NO.: 10/633926

DATED: April 26, 2005

INVENTOR(S): Gregory M. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent is

hereby corrected as shown below:

In FIG. 13,

add reference numeral --592-- and an appropriate lead

line (As shown below)

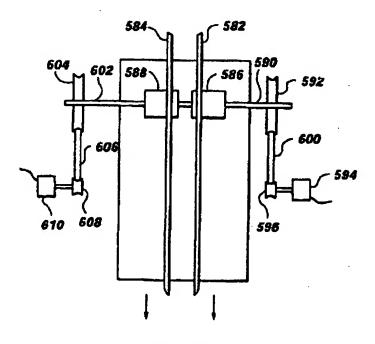


Fig. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

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APPLICATION NO.: 10/633926

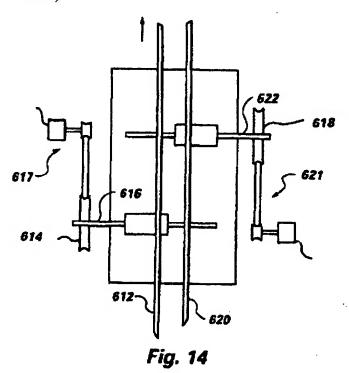
DATED: April 26, 2005

INVENTOR(S): Gregory M. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In FIG. 14,

move existing reference numeral "618" and associated lead line to far right upper side of drawing, with lead line for --618-- extending from portion adjacent to 622; move existing reference numeral "614" and associated lead line to far lower left side of drawing, with lead line for --614-- extending from portion adjacent to 616; delete lead lines without reference numerals (As shown below)



COLUMN 1, LINE 1,

change "APPARATUS FOR APPLICATION OF ADHESIVE TAPE TO SEMICONDUCTOR DEVICES" to --METHOD AND APPARATUS FOR APPLICATION OF ADHESIVE TAPE TO SEMICONDUCTOR DEVICES--

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DATED

APPLICATION NO.: 10/633926 : April 26, 2005

INVENTOR(S)

: Gregory M. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 1, LINE 47, change "lead-over chip" to --lead-over-chip--

COLUMN 7, LINE 52, after "die site" and before "of" insert --96--

COLUMN 9, LINE 20, change "thought he" to --through the--

COLUMN 10, LINE 24, change "show" to --shown--

COLUMN 11, LINE 8, change "rear cross member" to --rear cross member

168--

COLUMN 13, LINE 57, change "rings 341-343" to --rings 340-343--

COLUMN 13, LINE 59, change "length 340" to --length 340'--

COLUMN 14, LINE 6, change "340" to --340'--

COLUMN 14, LINE 8, change "340" to --340'--

COLUMN 14, LINE 15, change "bushings 302-315" to --bushings 302-305--

COLUMN 17, LINE 58, change "along right" to --along the right--

This certificate supersedes the Certificate of Correction issued March 3, 2009.

Signed and Sealed this

Thirty-first Day of March, 2009

Yohn Ooll

JOHN DOLL Acting Director of the United States Patent and Trademark Office

(12) United States Patent

Chapman

(10) Patent No.:

US 6,883,574 B2

(45) Date of Patent:

Apr. 26, 2005

(54) METHOD AND APPARATUS FOR APPLICATION OF ADHESIVE TAPE TO SEMICONDUCTOR DEVICES

(75) Inventor: Gregory M. Chapman, Meridian, 1D

(US)

(73) Assignee: Micron Technology, Inc., Boise, ID

(US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 10/633,926

(22) Filed: Aug. 4, 2003

(65) Prior Publication Data

US 2004/0026044 A1 Feb. 12, 2004

Related U.S. Application Data

(60) Continuation of application No. 09/875,632, filed on Jun. 6, 2001, now Pat. No. 6,607,019, which is a continuation of application No. 09/330,794, filed on Jun. 14, 1999, now Pat. No. 6,267,167, which is a division of application No. 08/908,291, filed on Aug. 7, 1997, now Pat. No. 6,096,165.

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(2)		mi. Ci.	 カンエカ シガルハ

(52) U.S. Cl. 156/433; 156/511; 156/517;

156/521

(56) References Cited

U.S. PATENT DOCUMENTS

1939 Brite
1965 Anspach
1967 Holman
1967 MacLeod

3,436,294 A	4/1969	Marano
3,536,550 A	10/1970	Von Hofe
4,193,834 A	3/1980	Bernardi
4,279,682 A	7/1981	Humagami et al.
4,317,695 A	3/1982	Asur Madhu P. et al.
4,539,058 A	9/1985	Burgess et al.
4,646,127 A	2/1987	Burnhart
4,862,245 A	8/1989	l'ashby et al.
4,985,105 A	1/1991	Masuda
5,108,536 A	4/1992	Sokolovsky et al.
5,286,679 A	2/1994	Farnworth et al.
5,304,842 A	4/1994	Farnworth et al.
5,635,009 A	6/1997	Kawamura et al.
6,012,502 A	1/2000	VanNortwick et al.
6,025,212 A	2/2000	VanNonwick et al.
6,096,165 A	8/2000	Chapman
6,099,678 A	8/2000	Kotato et al.
6,267,167 B1	7/2001	Chapman
6,607,019 B2 *	8/2003	Chapman 156/433

FOREIGN PATENT DOCUMENTS

JP	58-31514	2/1983
JP	04056150	2/1992

* cited by examiner

Primary Examiner—John T. Haran (74) Attorney, Agent, or Firm—TraskBritt

(7) ABSTRACT

A method and apparatus for application of adhesive tape to semiconductor devices are disclosed. A first adhesively coated tape material length is supplied to a first die associated with a cutting and application mechanism. A second length of adhesively coated tape material is also provided to a second die of the cutting and application mechanism. A plurality of LOC leadframes is supplied sequentially through the application structure to apply a first decal cut from the first tape material to a first die site at a first location and to apply a second decal cut from the second tape material to a second die site at a second location.

27 Claims, 13 Drawing Sheets

